SYSTEM AND METHOD FOR ROUTER VIRTUAL NETWORKING

ABSTRACT OF THE DISCLOSURE

A host router is logically partitioned into virtual router domains that manage independent processes and routing application copies but share a common operating system. Each v-net manages an independent set of sockets and host router interfaces, each associated with only one v-net at one time, but interchangeably repartitionable Traffic is removed from an interface during repartitioning. Duplicate arrays of global variables copied to each v-net are accessed by macro references. A v-net facility can separate route tables used internally from the externally visible route tables and can avoid conflicts between internal and external IP addresses that share the same identifier. For example a common FreeBSD operating system supports a dynamic routing protocol (DRP) application. Each v-net runs an independent copy of the DRP software and is logically independent. A failure in one DRP copy does not adversely affect other copies.